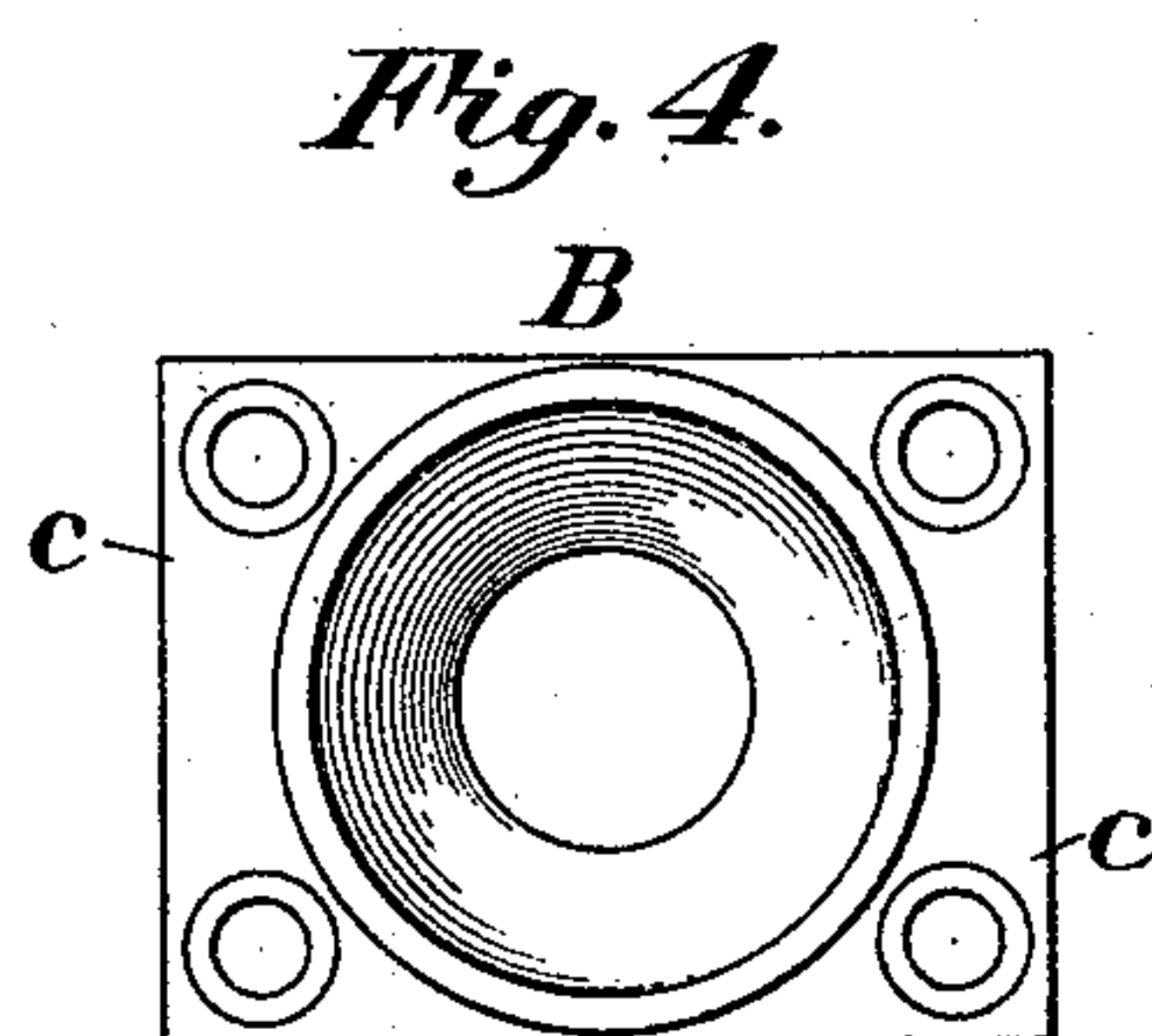
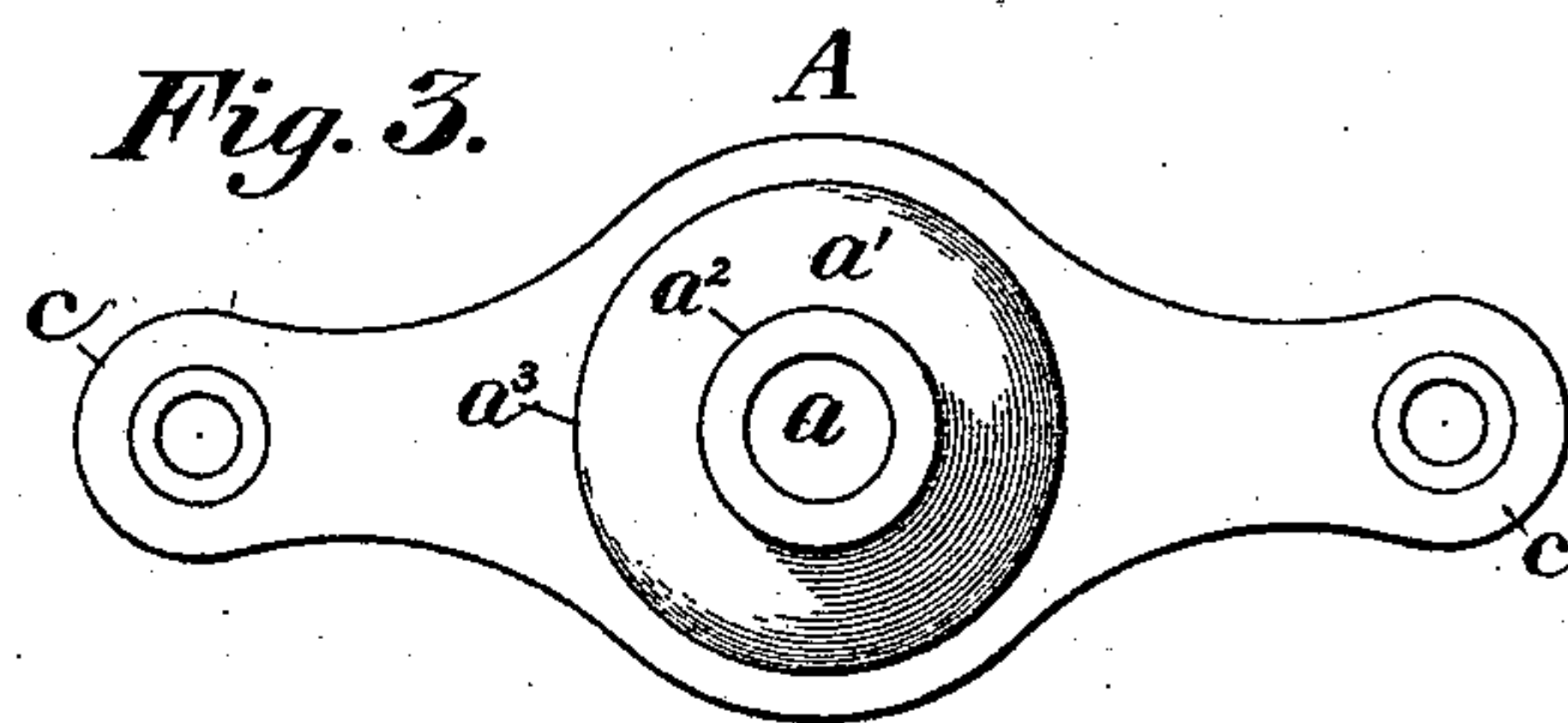
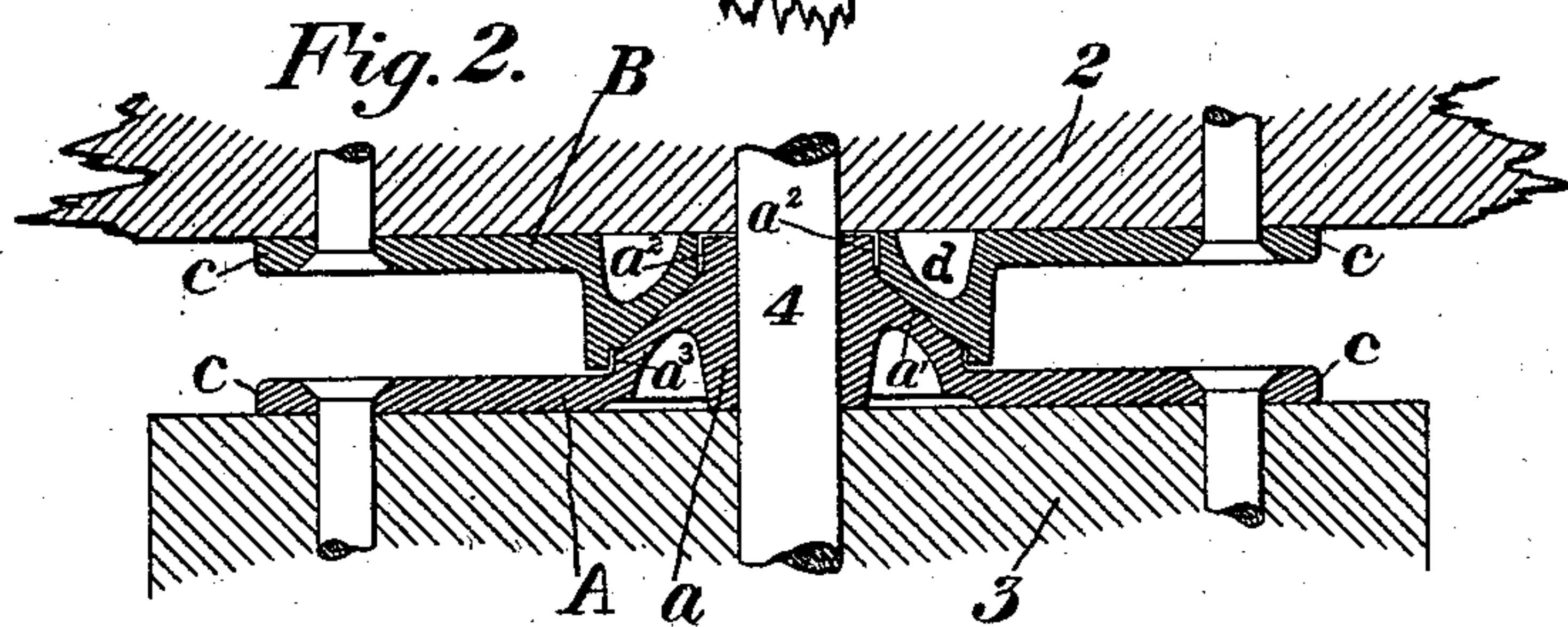
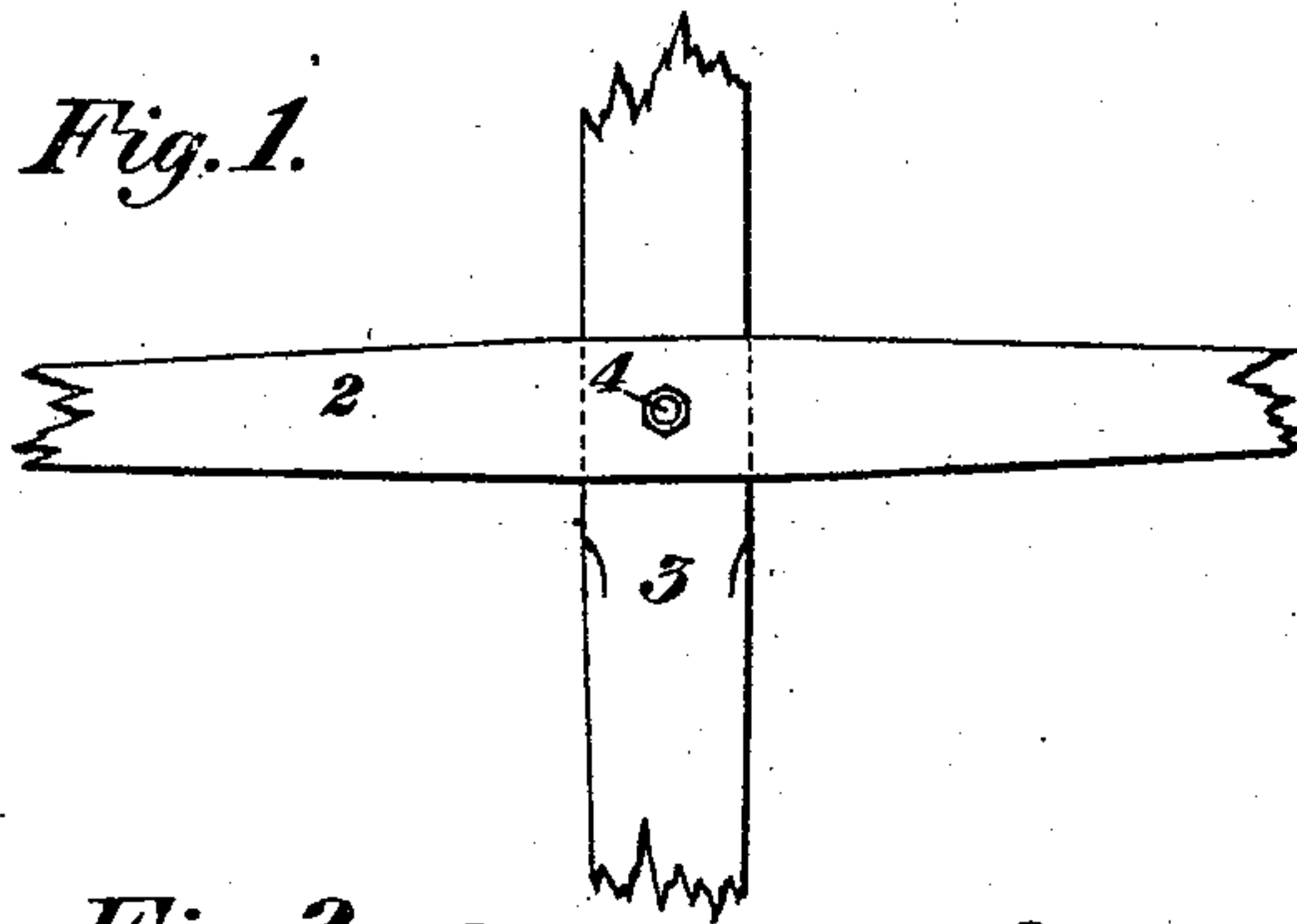


(No Model.)

W. A. SCHLEICHER.  
WHIFFLETREE COUPLING.

No. 455,119.

Patented June 30, 1891.



WITNESSES

*H. L. Gill.*  
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# UNITED STATES PATENT OFFICE.

WILLIAM A. SCHLEICHER, OF CLEVELAND, OHIO.

## WHIFFLETREE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 455,119, dated June 30, 1891.

Application filed August 28, 1890. Serial No. 363,268. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. SCHLEICHER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and  
5 useful Improvement in Whiffletree-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a plan view of a part of a whiffletree, illustrating the manner of use of my improved coupling device. Fig. 2 is a vertical sectional view on a larger scale. Fig. 3 is a plan view of one of the parts of the coupling. Fig. 4 is a plan view of one of the parts  
15 of a coupling of modified construction.

Like symbols of reference indicate like parts in each.

20 In the drawings, 2 represents the whiffletree, and 3 is the tongue or other portion of a vehicle to which the whiffletree is applied.

The whiffletree-coupling consists of two parts A and B, which are counterparts of each other, being conical through their vertical  
25 bearing-faces. The part A has a central hub or eye *a*, and its exterior bearing-surface, which is circular in cross-section, comprises a conical or tapering portion *a'*, and preferably, also, two cylindrical portions *a*<sup>2</sup> and *a*<sup>3</sup>. The  
30 part B has an exterior bearing-surface which is the counterpart of the bearing-surface of the part A, and to secure lightness of weight and to economize in the material employed I prefer to make the parts hollow or grooved,  
35 as shown at *d*.

The parts of the coupling are secured to the whiffletree and to the vehicle by means of screws or other securing devices, which pass

through projecting lugs or flanges *c*. I show two forms of such lugs or flanges, one of which 40 forms is illustrated in Figs. 2 and 3 and the other in Fig. 4.

When in use, the parts are nested together in the manner shown in Fig. 2, and the whiffletree is held to the tongue by means of a 45 bolt 4. It will be understood that it is immaterial which of the parts be secured to the whiffletree or to the vehicle. The coupling permits the whiffletree to turn freely. The parts of the coupling are not apt to wear loose, 50 and the article is very strong and durable and is neat in appearance.

It is desirable that there should be one or more cylindrical bearing-surfaces *a*<sup>2</sup> or *a*<sup>3</sup> to hold the parts of the coupling firmly together 55 and to prevent tendency to lateral motion.

The advantages of my invention will be appreciated by those skilled in the art.

Without limiting myself to the precise form of the parts illustrated, which may be modified by the skilled mechanic, I claim— 60

A whiffletree-coupling comprising two plates provided with a single inner and outer cone-shaped projection, respectively, which constitute the bearing-surfaces and terminate 65 at each end in interfitting cylindrical portions, said projections having central holes for the passage of a bolt or pin, substantially as described.

In testimony whereof I have hereunto set 70 my hand this 26th day of August, A. D. 1890.

WILLIAM A. SCHLEICHER.

Witnesses:

Mrs. M. E. BURKE,  
L. G. HOWLAND.